

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2003/001513

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7 A61F 2/20

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 A61F 2/06, 2/20, A61M 29/00, 29/02, A61L 29/16

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Patents and applications for inventions since 1975

Korean Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|-----------|---|-----------------------|
| X         | KR 20-0314211 Y1 (Yim, Hyun Cheol et al.) 23 May 2003 (23.05.2003)<br>See the whole document, claim 1, Figs.3-4             | 1                     |
| Y         | KR 2001-0054677 A (Lee, Gil Hwan et al.) 02 July 2001 (02.07.2001)<br>See the whole document, Fig.5, pages 6-4              | 1                     |
| Y         | KR 2002-0080024 A (Kweon, Byung Du et al.) 23 October 2002 (23.10.2002)<br>See the whole document, abstract, Fig.3, claim 1 | 1                     |
| A         | US 5674241 A (Bley et al.) 07 October 1997 (07.10.1997)<br>See the whole document   | 1                     |
| A         | KR 2003-0020476 A (Kang, Sung Kweon et al.) 10 March 2003 (10.03.2003)<br>See the whole document                            | 1                     |
| A         | KR 2003-0004582 A (Lee, Jong Heon et al.) 15 January 2003 (15.01.2003)<br>See the whole document                            | 1                     |
| A         | KR 2001-0084836 A (Kang, Sung Kweon et al.) 06 September 2001 (06.09.2001)<br>See the whole document                        | 1                     |

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

27 APRIL 2004 (27.04.2004)

Date of mailing of the international search report

28 APRIL 2004 (28.04.2004)

Name and mailing address of the ISA/KR



Korean Intellectual Property Office  
920 Dunsan-dong, Seo-gu, Daejeon 302-701,  
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

LEE, Sun Kuk

Telephone No. 82-42-481-5587



# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2003/001513

| C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT |  |                       |
|---|--|-----------------------|
| Category*   | Citation of document, with indication, where appropriate, of the relevant passages             | Relevant to claim No. |
| A   | US 5876448 A (Thompson et al.) 02 March 1999 (02.03.1999)<br>See the whole document            | 1                     |
| A   | KR 10-0295212 B1 (Shin, Kyung Min et al.) 26 April 2001 (26.04.2001)<br>See the whole document | 1                     |
| A   | US 5330500 A (Song) 19 July 1994 (19.07.1994)<br>See the whole document                        | 1                     |

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

PCT/KR2003/001513

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s)   | Publication<br>date  |
|---|---------------------|--|--|
| KR 20-0314211 Y1                          | 23-05-2003          | NONE   |  |
| KR 2001-0054677 A                         | 02-07-2001          | NONE   |  |
| KR 2002-0080024 A                         | 23-10-2002          | NONE   |  |
| US 5674241 A                              | 07-10-1997          | CA 2213403 AA<br>WO 9625897 A2<br>EP 810845 A2<br>AU 719980 B2                 | 29-08-1996<br>29-08-1996<br>10-12-1997<br>18-05-2000               |
| KR 2003-0020476 A                         | 10-03-2003          | NONE   |  |
| KR 2003-0004582 A                         | 15-01-2003          | NONE   |  |
| KR 2001-0084836 A                         | 06-09-2001          | NONE   |  |
| US 5876448 A                              | 02-03-1999          | EP 888758 B1<br>AT 247435 E<br>DE 69333161 C0<br>JP 2660101 B2<br>AU 693054 B2 | 20-08-2003<br>15-09-2003<br>25-09-2003<br>08-10-1997<br>18-06-1998 |
| KR 10-0295212 B1                          | 26-04-2001          | NONE   |  |
| US 5330500 A                              | 19-07-1994          | AU 8850391 A1<br>WO 9206734 A1<br>EP 506918 B1<br>DE 69116130 T2               | 20-05-1992<br>30-04-1992<br>03-01-1996<br>15-05-1996               |